

Amdt. dated November 20, 2007

Reply to Office Action of June 22, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A web content converting system for converting a large display screen web document into a small display screen web document, the system comprising:
 - a preprocessor for standardizing that standardizes a non-standard web document having an erroneous tag to output the a standardized web document in a data format suitable for analysis;
 - a client profile analyzer for extracting that extracts and managing manages client information, including client performance information;
 - a structure analyzer for receiving that receives the web document standardized in the preprocessor to set the web document to a content unit piece (component) according to a document analysis algorithm;
 - an image converter for extracting that extracts information on an image encoding/decoding procedure and an image size included in of the web document;
 - a component block extractor for grouping that groups the set content unit piece (component) to with similar groups within a range not exceeding a maximal width by using an attribution value of the content unit piece (component) and the client performance information;

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a component block categorizer for categorizing that categorizes each of the component blocks generated by the component block extractor into index and body content portions in accordance with a content characteristic;

an index generator for extracting that extracts information on an image or text index from the component block categorized into the index portion, and generating generates a script file and an additional tag collection for expressing to express the extracted information;

a voice-an auditory markup generator for converting that converts a text-centered body content block into a voice- an auditory markup language to perform a voice an auditory supporting function; and

a HyperText Markup Language (HTML) generator for rearranging that rearranges and reconstructing the reconstructs generated content object elements according to a document pattern to generate the-a small display screen web document.

2. (Original) The web content converting system of claim 1, wherein the web content converting system is installed at any one of three layers of a web server, a client and a proxy.

3. (Currently Amended) A web content converting method for converting a large display screen web document into a small display screen web document, the method comprising:

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a preprocessing step for standardizing a non-standard web document including an erroneous tag to output the a standardized web document in a data format suitable for analysis;

a web document analyzing step for receiving the standardized web document and analyzing a tag according to a document analysis algorithm to set the web document to a content unit piece (component);

a component block setting step for grouping the set content unit piece (component) to with similar groups within a range not exceeding a maximal width by using an attribution value of the content unit piece (component) and client performance information;

a component block categorizing step for categorizing each of component blocks generated by the a component block extractor into index and body content portions in accordance with a content characteristic;

an index generating step for extracting information on an image or text index from the component block categorized into the index portion, and generating a script file and an additional tag collection for expressing to express the extracted information;

a voice markup generating step for converting a text-centered body content block into a voice an auditory markup language to perform a voice an auditory supporting function; and

a HyperText Markup Language (HTML) generating step for rearranging and reconstructing the generated content object elements according to a document pattern to

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generate ~~the~~a small display screen web document.

4. (Currently Amended) The web content converting method of claim 3, wherein in the ~~web document analyzing standardizing~~ step, a tag such as <TABLE>, <TR>, <TD>, , etc. is mainly analyzed, and a specific <TD> tag is defined as a component to be used as a minimal unit for the content unit analysis.

5. (Currently Amended) The web content converting method of claim 3, wherein in the ~~component block setting grouping~~ step, a component tree is ~~inputted~~ input to check initial width information for all component nodes, and ~~it is checked~~ the step comprises checking whether or not a sibling node of a current component node exists, and if ~~existing~~ a sibling node of a current component node exists, similar sibling nodes are bundled and grouped within ~~the~~a range not exceeding the maximal width (MAX_WIDTH).

6. (Currently Amended) The web content converting method of claim 3, wherein the ~~component block~~-categorizing step comprises the steps of:
receiving a component block tree ~~to visit all~~ for each of the component blocks while ~~to compare~~ comprising a content pattern of the component block;
determining an index type if a resultant value of the pattern comparison exceeds a

certain critical value;

setting a type of the index-determined block to each of an image index (INDEX_I) or a text index (INDEX_T) depending on whether a data type of the content is an image or a text; and

categorizing ~~the-a~~ block not being ~~the-an~~ index ~~into the portion as a body content portions~~, and categorizing ~~the voice an auditory~~ body (BODY_V) ~~for performing to perform~~ the converting into the ~~voice supporting auditory~~ document and ~~the-a general~~ body (BODY_G) processed as other general content blocks.

7. (New) The web content converting system of claim 1, wherein the auditory markup generator comprises a voice markup generator that converts a text-centered body content block into a voice markup language to perform a voice supporting function.

8. (New) The web content converting method of claim 1, wherein converting a text-centered body content block into an auditory markup language to perform an auditory supporting function comprises converting a text-centered body content block into a voice markup language to perform a voice supporting function.

9. (New) In a portable terminal for receiving contents from a network web server, a

portable terminal comprising:

a network interface configured to access the web server via the network; and
a web contents transcoding system configured to process contents provided by the web server for a first display performance to a second reduced display performance according to identified unit pieces of the transmitted contents.

10. (New) In a portable terminal for receiving contents from a network web server, a user terminal comprising:

a web content transcoding system processor configured to process the contents transmitted by the web server for a first display performance to a second reduced display performance of a portable terminal according to identified unit pieces of the transmitted contents; and

a communication port configured to transmit the processed contents to the portable terminal.

11. (New) The terminal of claim 10, wherein the web contents transcoding system comprises:

a first processor configured to standardize a web document;
a second processor that receives the standarized web document and determines a

plurality of content unit pieces in accordance with a layout of the standardized web document;

a third processor configured to transcode the content unit pieces by grouping corresponding content unit pieces into component blocks according to characteristics of a client performance and the attribution value of each content unit piece and categorize each component block into the identifier and data portions depending on the characteristic of the content; and

a fourth processor configured to rearrange and reconstruct categorized object elements according to a document pattern to generate a customized web document.

12. (New) A method, comprising:

receiving a first web document;

determining a plurality of content unit pieces of the web document;

grouping the plurality of content unit pieces based on client information and information of the grouped content unit pieces; and

generating a second rearranged web document according to the grouped content unit pieces.

13. (New) The method of claim 12, wherein the determining comprises analyzing structural tag information of the first web document.

14. (New) The method of claim 12, wherein the grouping comprises selecting each content unit piece in a range not exceeding a width of a single screen based on said client information.

15. (New) The method of claim 12, wherein the second rearranged web document is displayed without a scroll bar for a width direction.

16. (New) The method of claim 12, wherein the generating comprises:
categorizing the grouped content unit pieces into one of an index and body content;
extracting the grouped content unit pieces in accordance with the categorized index and body content; and
arranging the extracted grouped content unit pieces to obtain the second rearranged web document.

17. (New) The method of claim 16, wherein the extracting comprises:
determining a type of a categorized index as a text index or an image index; and
determining a type of a body content as a first document or a voice supportable document.